

OB01 EXPANSION FOR EMU SP12 & SP1200

Here is a quick guide for fitting your expansion card. Fitting will normally take between 30-60 minutes depending on your tools and skill level. There is no shame in taking longer! What is important is that it is done correctly.

THIS GUIDE IS PROVIDED TO ASSIST YOU WITH THE FITTING OF THE OB01 AND REMAINS THE PROPERTY OF JAZZCATS AKAI PARTS AND REPAIRS. NO UNAUTHORISED COPYING OR PUBLICATION OF THIS GUIDE IS PERMITTED.

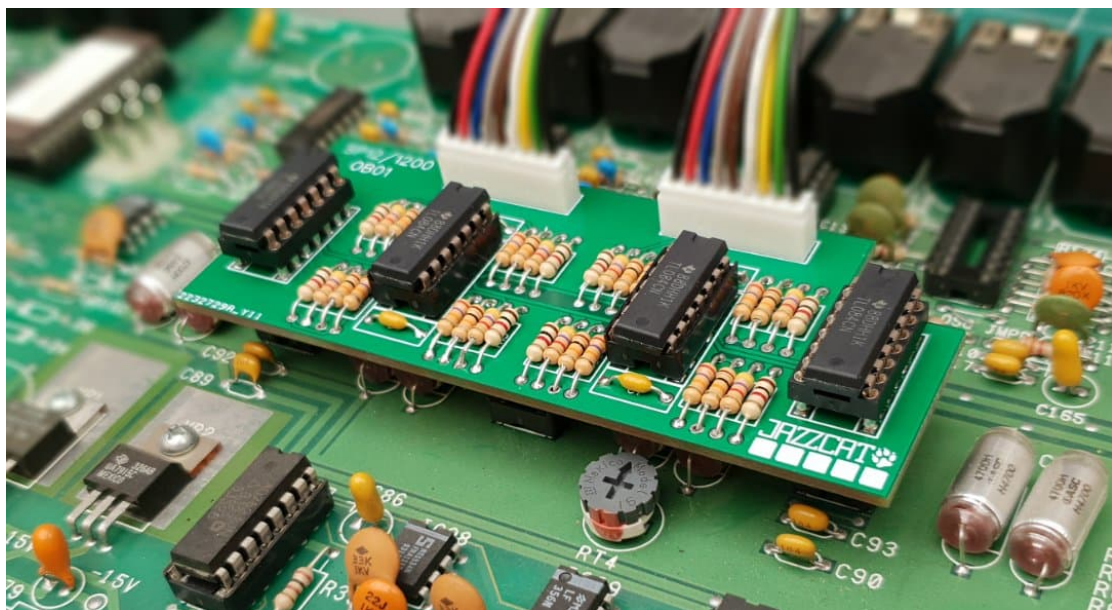
NOTES BEFORE INSTALLATION:

Please ensure that you have the required soldering skills and equipment before attempting this modification. Jazzcats Akai Parts and Repairs accepts no responsibility for any damage caused during the modification of your sampler.

Recommended tools:

- Temperature regulated soldering iron
- De-soldering pump
- A good flux solder
- Screwdriver
- Small wire cutters (optional)
- Multimeter (optional)
- Isopropyl alcohol (optional)

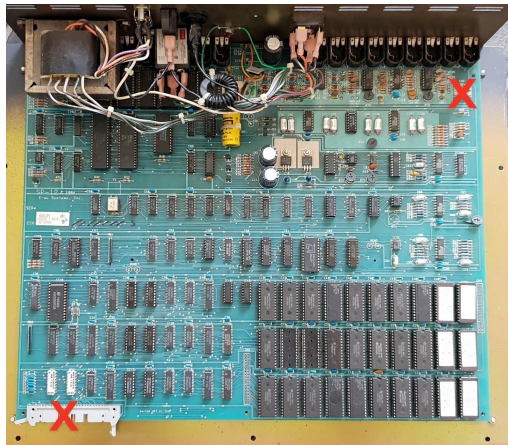
The OB01 has been carefully designed to provide the best mount and circuit modification without being too intrusive to the sampler's original design. The card itself mounts within two IC sockets on the motherboard. This takes care of mounting the card and a lot of its circuitry. Once correctly fitted, the upgrade looks very tidy.



Fitting Guide

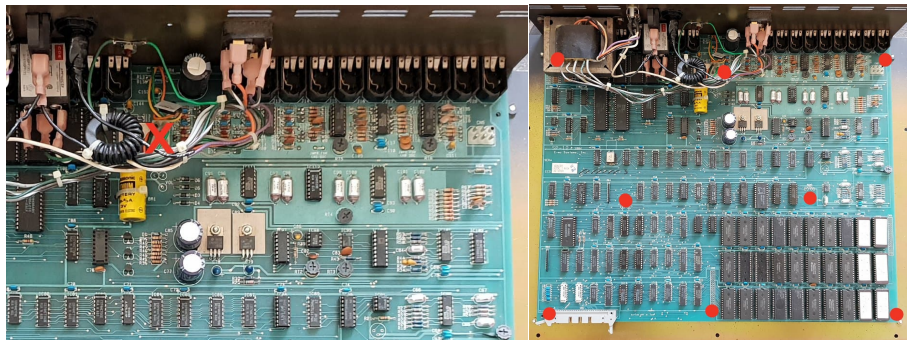
STEP 1: Ensure unit is disconnected from the mains and has no cables plugged into it. Remove all 3 screw on the top rear edge of the sampler, then the 5 screws on the base of the unit.

STEP 2: Carefully remove the big 50 Way cable connecting the motherboard and control board. This unplugs from both boards but is easier to do on control board side. Then, unplug the 6 way audio cable that also connects the two boards on the motherboard side. The top of the unit can now be moved to a safe place.



STEP 3: Unplug CN6 PSU cable from motherboard and remove all 6 screws that attach the motherboard to the base of the unit.

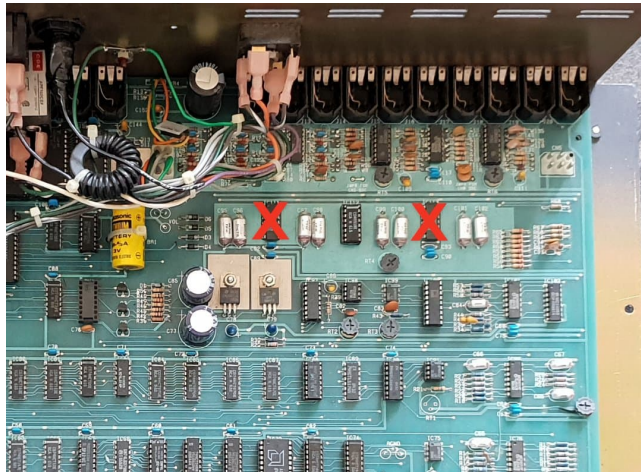
If you have a 12 or grey 1200 you will also need to unscrew the voltage regulator that is mounted to the rear of the SP12/1200. *Make a note of how the grommet and spacers are used.*



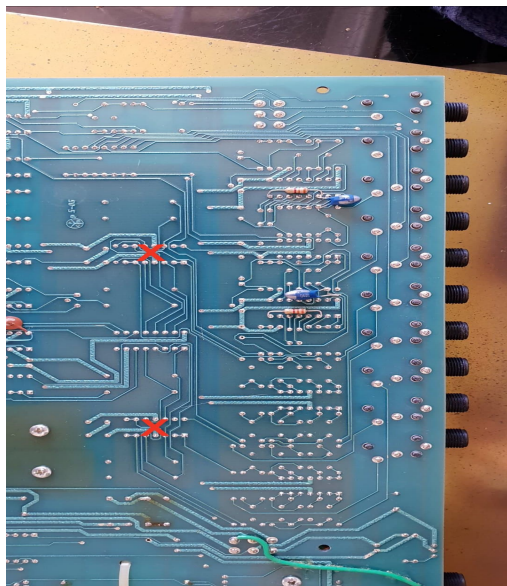
STEP 4: Turn to rear of the unit and carefully remove all the nuts and washers from all 16 insert sockets. Occasionally the washers stick to the body, if they do don't worry as they can stay there.

STEP 5: Once all screws are removed and nuts from the rear, the motherboard should move freely. It is best to give it a careful wiggle before attempting to lift out, just to check.

STEP 6: A large number of SP12 units and lots of SP1200 units already have a socket in place for the two amplifier chips you need to remove, locate these chips at IC111 and IC113. If your SP doesn't have sockets here, do not worry as the kit comes with two for you to install. Please find these in the Kit.



STEP 7: Flip the motherboard over and locate the footprint solder points of IC111 and IC113 (FIG A) and mark with a pen. Everyone has their own way of removing an Integrated circuit chip. If you have experience then you will know what you are doing here. For the people using less powerful de-soldering pumps, it may be easier if you snip the legs of the chip near body of IC's first as this means you are removing individual pins instead of a chip with multiple solder points.

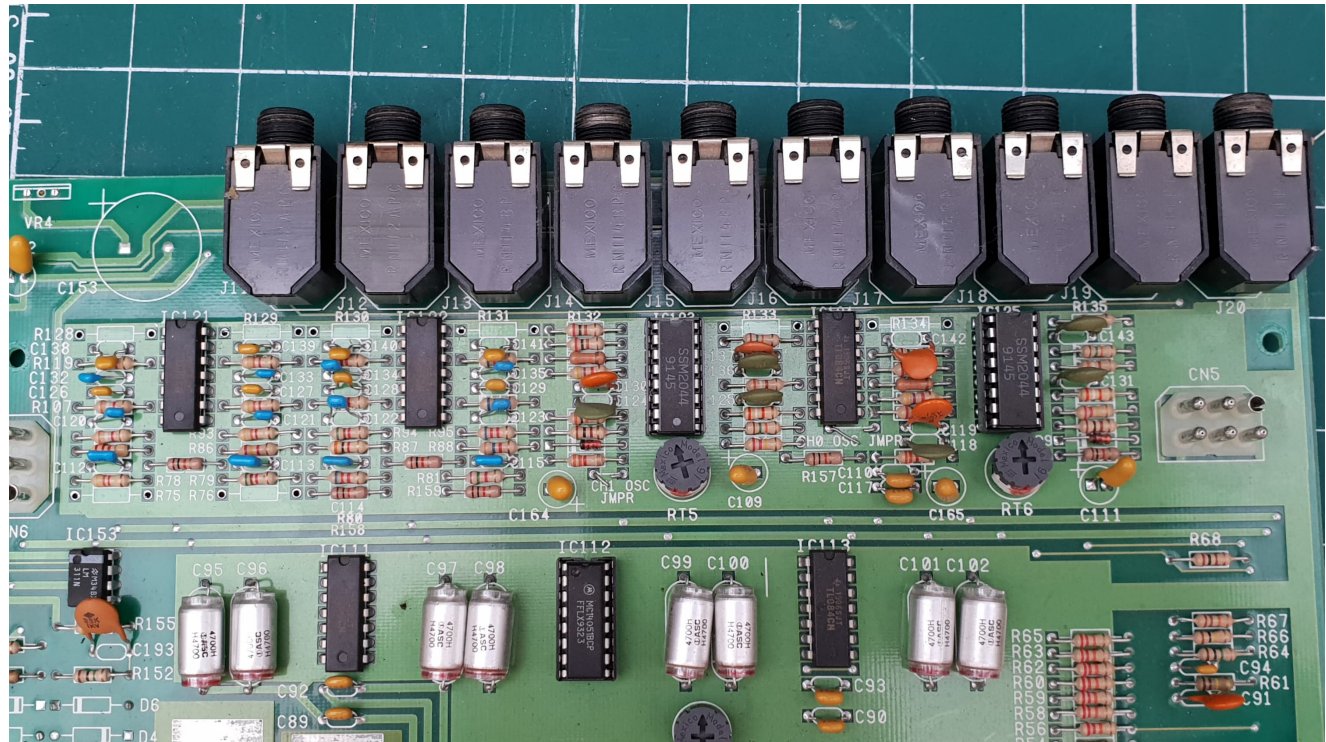


(FIG A)

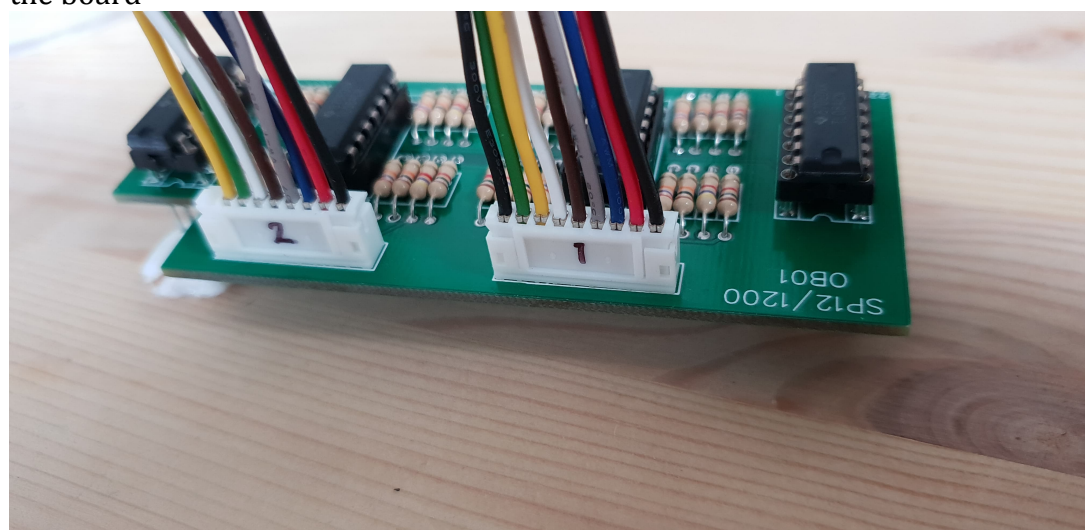
STEP 8: Carefully de-solder all 14 solder points on each IC, so that the metal legs are no longer fixed to the board. Once these are clear of solder, the chips legs will remove easily from the board. Occasionally the solder will not flow nicely. I find adding some fresh solder first makes it easier to remove all the solder from these points.

STEP 9: Once IC111 and 113 have been removed it is time to check your solder points are undamaged and free from any small debris left from removal. Once happy with this you can insert the new IC sockets so the notch faces up and solder in place. Please ensure sockets are flat and tight to the board before soldering as this provides strength to the legs and solder joints. Once in place, clean the area with rubbing alcohol/ Isopropyl and check for shorts in the circuit.

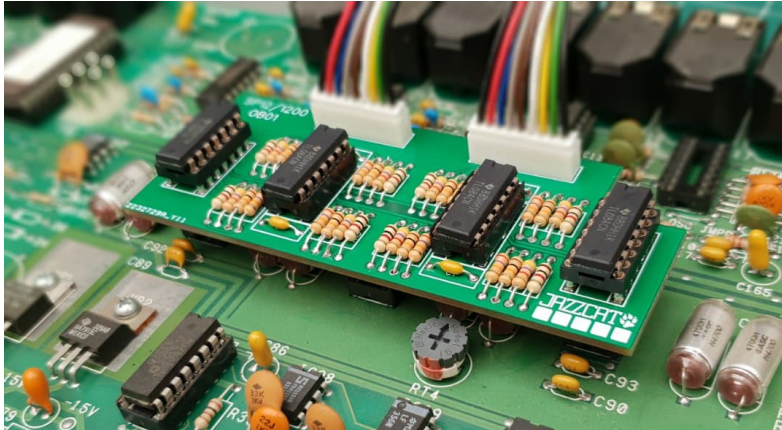
STEP 10: You now need to remove 8 resistors from the summing network of the outputs. These are 1k resistors marked R75, R76, R128, R129, R130, R131, R133, R134. Once these have been carefully removed your SP should look like this.



STEP 11: Find the two cables in your kit marked 1 and 2, these can now be inserted into the OB01 board so that 1 is on the left and 2 is on the right side of the board



STEP 12: Carefully line up the socket pins of the OB01 to IC 111 and IC113 and press down firmly so that the card is inserted.



STEP 13: It is now time to solder the coloured wires to the resistor points. The wires will need careful measuring so they can be cut to the appropriate length for each location, you don't need them to be too long but it is important that they are not cut too short.

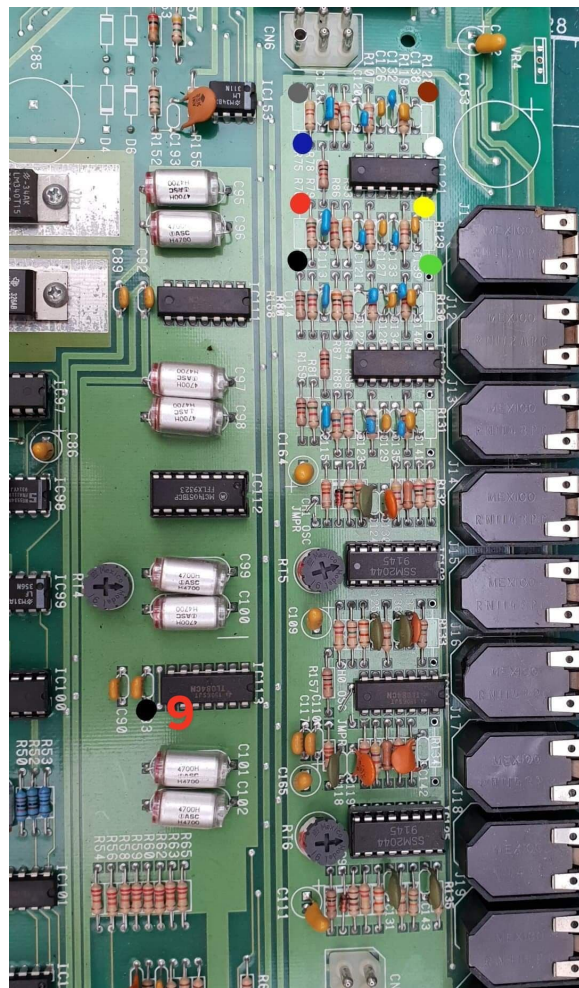
Once cut to size, carefully strip the end shielding so the wires can be inserted through each solder point.

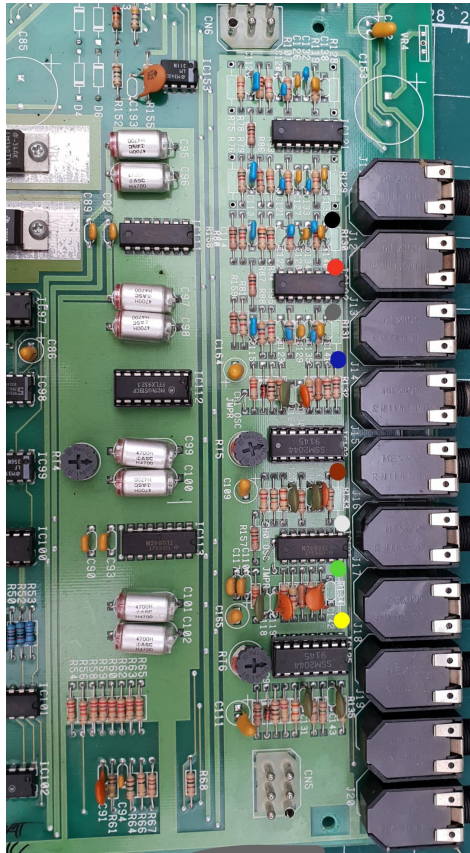
Each wire is colour coded, however cable 1 has two black wires, the right hand side wire on this cable (photo above) is marked 9 and must be soldered to the right hand side of C92.

CABLE 1

The location points of each wire are as follows:

BLACK- RIGHT SIDE OF R76
RED - LEFT SIDE OF R76
BLUE - RIGHT SIDE OF R75
GREY - LEFT SIDE OF R75
BROWN - LEFT SIDE OF R128
WHITE - RIGHT SIDE OF R128
YELLOW - LEFT OF R29
GREEN - RIGHT OF R29
BLACK (9) RUNS UNDER OB01 AND
SOLDERS TO RIGHT SIDE OF C92



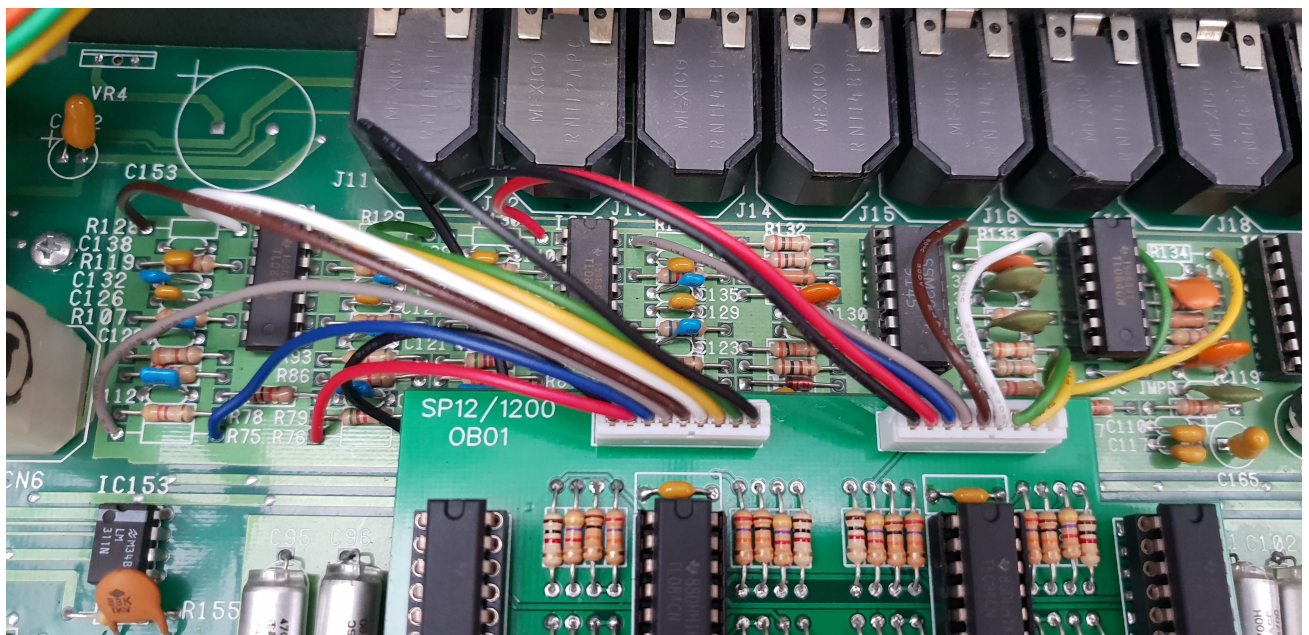


CABLE 2:

The location point of each wire is as follows:

BLACK – LEFT OF R130
 RED – RIGHT OF R130
 BLUE – RIGHT OF R131
 GREY- LEFT OF R131
 BROWN – LEFT OF R133
 WHITE – RIGHT OF R133
 GREEN – LEFT OF R134
 YELLOW – RIGHT OF R134

ONCE FINISHED THE SP SHOULD LOOK LIKE THIS



STEP 14: Check your work, then check it again!

Once you are happy with this stage the motherboard can be fitted back into the base of the SP following steps 6,7,8 in reverse.

STEP 15: Check everything is correct and reassemble the SP using steps 1,2,3 in reverse.

Once the SP has been put back together, you can now test the unit.

The sp will sound exactly as it did before, but will now be louder by 10db on all its audio outputs.

If you do run into any problems at this point PLEASE contact me at beatdiggerjazzcat@hotmail.com for technical support.

I hope you enjoy this upgrade

